1 - Product and Company Identification

Product name: Cublen DNC 450

Product type/usage/industry: Aqueous solution of an aminophosphonic acid

Manufacturer/Supplier Information:
Zschimmer and Schwarz, Inc.
70 GA Hwy. 22 W
Milledgeville, GA 31061
Phone: (478) 454-1942

Emergency contact:
Company: (478) 454-1942
CHEMTREC (24HR): (800) 424-9300

2 – Hazards Identification

Classification of the substance or mixture:

Classification of this substance/mixture is based on **29 CFR 1910.1200/HazCom 2012 (GHS-US)**

Skin Corrosion/Irritation	Category 1A	H314	Causes severe skin burns and eye damage
Corrosive to Metals	Category 1	H290	May be corrosive to metals

Labelling:

Signal Word:

WARNING!

Hazard Symbols:

Precautionary Statements:
P234: Keep only in original container.
P260: Do not breathe dusts/mists.
P264: Wash thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P363: Wash contaminated clothing before reuse.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310: Immediately call a POISON CENTER/doctor.
P390: Absorb spillage to prevent material damage.
P405: Store locked up.
P406: Store in a corrosive resistant container with a resistant inner liner.
P501: Dispose of contents/container in accordance with local, state, and federal regulations.

Key to Hazard Categories:

1=Severe Hazard **2=Serious Hazard** **3=Moderate Hazard** **4=Slight Hazard** **5=Minimal Hazard**

3 – Composition/Information on Ingredients

CAS Number	Material or component	Avg % weight
15827-60-8	Phosphonic acid, [[(phosphonomethyl) imino]bis[(2,1-ethanediylnitrilo)bis(methylene)]]tetra kis-,	25 – 50%
7664-93-9	Sulfuric acid	5 – 25%

This is not intended to be a complete compositional disclosure. Information provided pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200/ HazCom 2012). See Section 8 for Exposure Limits, if any.

4 - First Aid Measures

Eyes: Rinse cautiously with water for several (15) minutes. Remove contact lenses if present and easy to do – continue rinsing. Get immediate medical advice/attention.

Skin: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or a rash occurs: Get medical advice/attention.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Ingestion: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.

5 - Firefighting Measures

Extinguishing Media: Water spray, dry chemical, alcohol foam, or carbon dioxide.

Unsuitable Extinguishing Media: None known.

Special Protective Equipment for Firefighters: Self-contained breathing apparatus and protective clothing when fighting any chemical fire.

Unusual Fire & Explosion Hazards: In case of fire, containers may explode from internal pressure. Cool with water. May emit toxic fumes of CO_x, PO_x and NO_x under fire conditions.

6 - Accidental Release Measures

Personal precautions: Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep people away from and upwind of spill/leak. Ensure adequate ventilation, especially in confined areas. Do not get in eyes, on skin, or on clothing. Wear protective gloves/eye protection/face protection.

Environmental precautions: P273: Avoid release to the environment
Limit leakage with earth or sand. Do not discharge into the drains/surface water/groundwater. Dispose of absorbed material in accordance with local, state and federal regulations.

Methods for Containment/Cleaning Up: Use neutralizing agent. Take up with absorbent material (e.g. vermiculite, general purpose binder). Dispose of absorbed material in accordance with local, state, and federal regulations.

7 - Handling and Storage

Handling: P261: Avoid breathing mists/vapors of product
P262: Do not get in eyes, on skin, or on clothing
P264: Wash thoroughly after handling
P280: Wear protective gloves/eye protection/face protection

Storage: P402+404: Store in a dry place. Store in a closed container
P403+233: Store in a well ventilated place. Keep container tightly closed.

Special Packaging Requirements: P406: Store in a corrosive resistant container with a resistant inner liner.
Do not use iron, steel, copper / copper-alloys or light alloy receptacles.

Incompatible Materials or Fire/Explosion Protection: Oxidizers, alkaline materials.

8 - Exposure Controls/Personal Protection

Personal Protective Equipment (PPE):

Hand Protection: Use impervious gloves.

Eye Protection: Wear safety glasses with side shields or full face shield.

Skin Protection: Wear protective clothing.

Respiratory Protection: Recommended if ventilation is limited.

Engineering Measures/Controls:

Ventilation: Ensure adequate ventilation to maintain product at acceptable airborne levels.

Other measures: Eye-wash station.

Exposure Limits/Guidelines:

Material	CAS #	BASIS	TYPE	VALUE
Sulfuric acid	7664-93-9	OSHA	TWA	1 mg/m^3

9 - Physical and Chemical Properties

Form and Appearance:	Brown liquid	**Odor:**	Characteristic
pH:	~2.0 @ 1%	**Odor Threshold:**	N/D
Boiling Point:	~ 212°F (100°C)	**Melting/Freezing point:**	~ -5°F (-15°C)
Vapor Pressure:	N/D	**Vapor Density (Air=1):**	N/A
Flash Point:	N/A	**Evaporation Rate:**	N/D
UEL:	N/A	**LEL:**	N/A
Viscosity:	N/D	**Solubility in Water:**	Fully miscible
Octanol/Water Partition Coefficient:	N/D	**Specific Gravity/ Bulk Density:**	~1.5
Auto-ignition temperature:	N/D	**Decomposition Temperature:**	N/D
Volatile content:	N/D	**VOC Data:**	N/D

10 - Stability and Reactivity

Chemical Stability: Product is stable under ordinary conditions of use and storage.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Extreme temperatures.

Incompatible Materials: Oxidizers, alkaline materials, metals.

Hazardous Decomposition Products: Extremely high temperatures and fire conditions may produce CO_x, PO_x, and NO_x.

11 - Toxicological Information

Acute Data:

Principle Routes of Exposure: Eye contact, skin contact, ingestion, inhalation (mist).

Acute Toxicity

Route of exposure:	Test type:	Species:	Results:	Comments:
Oral	LD50	Rat	>5000 mg/kg	H303: May be harmful if swallowed (low pH)
Dermal	LD50	Rat	>5000 mg/kg	-

Irritation and Corrosion

Target organ:	Species:	Results:	Comments:
Eyes	Rabbit	Severely irritating	Irreversible eye damage possible
Skin	Human	Severely irritating	Skin burns possible

Sensitization

Target organ:	Species:	Results:	Comments:
Skin	Human	No effects known	-

Specific Target Organ Toxicity – Single Exposure

Target organ:	Species:	Results:	Comments:
None			-

Chronic Data:

Carcinogenicity

IARC	NTP	ACGIH	OSHA
No	No	No	No

Mutagenicity: NDA

Reproductive Effects: NDA

Target Organ Effects: NDA

12 - Ecological Information

Acute Aquatic Toxicity

Species:	Test type:	Exposure time:	Results:	Comments:
Salmo gairdneri	LC50	96h	>200 mg/l	-
Daphnia magna	EC50	48h	>250 mg/l	-

Environmental Fate

Persistence/Degradability: This product is not readily biodegradable.

COD/BOD5: NDA

Bioaccumulation Potential: This product is not expected to bioaccumulate.

Mobility in Soil: Low.

Other Adverse Effects: NDA

13 - Disposal Considerations

Product: Dispose of absorbed material/content and/or container in accordance with local, state, federal and/or international regulations.

Packaging: NDA

14 - Transport Regulations

US DOT Regulations (Land Transport):

Proper Shipping Name: CORROSIVE LIQUID, N.O.S. (aminophosphonic acid, sulfuric acid)

Hazard Class: 8

UN Number: UN1760

Packing Group: II

Label Required: CORROSIVE

Other Information: -

IATA/ICAO Regulations (Air Transport):

Proper Shipping Name: CORROSIVE LIQUID, N.O.S. (aminophosphonic acid, sulfuric acid)

Hazard Class: 8

UN Number: UN1760

Packing Group: II

Label Required: CORROSIVE

Other Information: -

IMDG/IMO Regulations (Maritime Transport):

Proper Shipping Name: CORROSIVE LIQUID, N.O.S. (aminophosphonic acid, sulfuric acid)

Hazard Class: 8

UN Number: UN1760

Packing Group: II

Label Required: CORROSIVE

EMS Number: F-A,S-B

Segregation Groups: Acids

Marine Pollutant (Y/N): N

Other Information: -

15 - Regulatory Information

Domestic Regulations

Components requiring notification

SARA 302 (TPQ)	SARA 304 (RQ)	SARA 313	CERCLA (RQ)	CAA 112(b) HAPS	CAA 112(r)
Sulfuric acid (7664-93-9) – 1000 lbs	Sulfuric acid (7664-93-9) – 1000 lbs	None	Sulfuric acid (7664-93-9) – 1000 lbs	None	None

SARA 311/312 Hazard Categorization: Acute Health Hazard

State Information

California Proposition 65: May contain the following components known to the State of California to cause cancer, birth defects, or other reproductive harm.

Sulfuric acid (7664-93-9) (listed as "Strong inorganic acid mists containing sulfuric acid")

State Right to Know/ Hazardous Substance List Information: The following chemicals are present on one or more Right to Know/Hazardous Substance Lists for the states of MA, MN, NJ, PA and RI.

Sulfuric acid (7664-93-9)

This is not an exhaustive list. For information on listings in other states, please consult that state's RTK/HSL.

Chemical Inventories

United States (TSCA)	EUROPE (EINECS/ ELINCS/ NLP)	Australia (AICS)	Philippines (PICCS)	Canada		Korea (ECL)	Japan (ENCS/ ISHL)	China (IECSC)	New Zealand (NZIoC)
				DSL	NDSL				
Yes	Yes	Yes	NDA	Yes	No	Yes	No	Yes	Yes

16 - Additional Information

Key to Abbreviations:

NDA - No data available N/D - Not determined N/A - Not applicable N/E - Not established

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